

Request for Proposal for

Consultancy Services

for

Rendering Architectural & Engineering Design for Interior
works at Semi Cryo Test Control Centre,
IPRC, Mahendragiri

Owner : Indian Space Research Organisation

Project : Semi Cryo Test Control Centre

Location : IPRC, Mahendragiri



IPRC, Mahendragiri

INDIAN SPACE RESEARCH ORGANISATION

1. INTRODUCTION:

This tender invites proposals from well qualified Interior, Acoustic and Control centre interior designers /consultants (herein after referred as Consultant), to be engaged by IPRC (herein after referred as the Department), for **Rendering Architectural & Engineering Design consultancy services** in Semi Cryo Test Control Centre, for which the civil structure is already available in IPRC, Mahendragiri, Tamil Nadu. The Department plans to employ a Consultant, who has sufficient knowledge, qualification and experience in the relevant field to realize the facility to the best quality standards and technology, with minimum possible expense. **The detailed scope of work for the Consultant, selection criteria etc., are specified in this document.** Execution of the Project, based on the Tender Document prepared by the Consultant, will be carried out by the Department through another agency (here in after referred as the Contractor), as finalised by the Department through its normal purchase procedure. The terms and references related to this Project are detailed in this document.

2. PROJECT BRIEF:

2.1 General

Semi cryo Test Control Centre is a Ground + one floor building and is a RCC framed structure. The building primarily consists of Control room and Visitor's gallery and other service rooms. The Civil works portion of the building i.e. structure is completed. Control centre is in the ground floor with high bay construction and visitor's gallery is in the first floor. **(Typical floor plans and sections are provided in Annexure A).**

This RFP is for interior consultancy work for the Control room and Visitor's gallery.

The Test Control Centre built-up civil structure has the following specifications

| Approximate Sizes of the rooms: | |
|---|------------------|
| Size of the Control room | 22000 x 14350 mm |
| Size of the Visitor's Gallery room | 15350 x 10175 mm |
| Conference Room | 10500 x 8200 mm |
| Data Acquisition Room / Control system room | 5700 x 10800 mm |
| Wall panelling Area | 1700 sq m |
| False Ceiling Area | 1000 sq m |
| Seating capacity of Visitor's gallery | 220 Nos |
| Operator consoles in Control Centre | 36 Nos |
| Video wall size | 14 m x 5 m |

2.2 Applications:

The Test Control Centre will be mainly used for the following applications

- 2.2.1. Control and monitoring of test stand activities
- 2.2.2. Remote Control of pre-test, post test and hot test activities
- 2.2.3. Display of trend graphs, parameters display and test stand views in video wall
- 2.2.4. Visitors viewing the test activities through video wall
- 2.2.5. Video conference between ISRO centres.

3. SCOPE OF CONSULTANCY :

The scope of the Consultancy work will be as follows:

- 3.1. To provide state of art interior design for acoustic wall panelling and false ceiling for the Test Control Centre. Conventional design as in office building is not preferred. State of art design with better aesthetics, ergonomics and acoustics is required for TCC.
 - 3.2. To prepare conceptual design with various options to finalise the design.
 - 3.3. To provide audio and video solutions for the control room, visitor's gallery and conference hall to attain best AV performance for the indenting application.
 - 3.4. To provide sleek type console design and console layout arrangements to mount All-in-one PC in consoles at control room.
 - 3.5. To provide design for modular cabinets and filing cabinets for service rooms like Control system Room, Data acquisition Rooms etc.
 - 3.6. To provide furniture design.
 - 3.7. To provide the detailed layout of electrical fittings and design for illumination levels as per relevant standards.
 - 3.8. To prepare a detailed tender document for the approved design inclusive of the technical specifications with quantity and price so as to enable the Department to identify a contractor for satisfactorily executing the Project.
 - 3.9. To submit item wise estimate of work showing quantities of each item, item description, rate of item.
 - 3.10. To prepare all drawings and details for inviting tenders and for proper execution of work during erection. Drawings / details must be issued in three hardcopies and one soft copy.
 - 3.11. To plan the overall management of the entire work at the earliest realization time using PERT chart.
 - 3.12. The Consultant shall make site visits (minimum 5 visits) to oversee the work and give technical guidance to Department / contractor during the execution of work whenever called, so as to confirm the work progress as planned in the design document.
 - 3.13. To suggest corrective/remedial actions required if any, during the site visit regarding the progress of work.
- The design shall be in compliance with **ISO 11064** Ergonomics design of control centres.

4. SCHEDULE OF SERVICES:

The Consultant shall, after the release of Purchase Order, render the following services:

4.1. Stage 1: Conceptual Design

- 4.1.1. Submission of architectural interior design proposals including false ceiling layout with LED light fittings, Wall panelling, sleek console design, ergonomic chairs, AV Systems, HVAC systems*, Smoke detection# for Control Room & Visitor's Gallery, and cabinet design for Service rooms like Control System Room, Data Acquisition Room.
- 4.1.2. Minimum of 5 state of art 3D designs & rendering with various conceptual designs.
- 4.1.3. The design shall take in to account the acoustic parameters, Audio/Visual effects, illumination levels, HVAC* duct modification requirements, FDA# systems etc. apart from aesthetics.

4.2. Stage 2: Preliminary Design and Drawing

- 4.2.1. Modify the conceptual design incorporating required changes and prepare the preliminary drawings, sketches, etc for Department's approval.
- 4.2.2. The drawings include civil interior drawings, electrical drawings, HVAC* drawings, smoke detection schemes#

4.3. Stage 3: Tender Drawings, Tender Documents & Estimates

- 4.3.1. Prepare drawings necessary for Department's approvals and ensure compliance with codes, standards. Prepare specifications.
- 4.3.2. Prepare schedule of quantities and cost estimates.
- 4.3.3. Prepare Tender Documents including code of practice covering aspects like mode of measurement, method of payments, quality control procedures on materials and works and other conditions of contract.

4.4. Stage 4: Working Drawings and Detailed Engineering drawings

- 4.4.1. Prepare working drawings for construction
- 4.4.2. Prepare Detailed Engineering drawings
- 4.4.3. Approved Colour schemes
- 4.4.4. Execution scheme / procedure for smooth completion of work

**HVAC ducts are available in site roof. Duct routing may be modified as per the false ceiling design, if required*

#Smoke detection and FDA systems will be provided by department. Only provisions shall be made available at false ceiling to mount the detectors

5. QUALIFICATIONS OF THE CONSULTANT:

5.1. Consultant must be a qualified professional in the field with sufficient experience and knowledge of interior design, acoustics and noise control of similar control rooms/ theatres /auditoriums.

5.2. Bidder's Experience: The bidder may either be an Indian architectural firm with minimum 5 years experience or a consortium of at most three firms led by an Indian architectural firm with a minimum of 5 years experience. The requisite deed of formation /association/registration etc. should be submitted in support so that the legal credentials can be established.

The bidding Architect /Architectural firm is required to submit a complete list of consultants, specialists, and experts (each with a minimum of experience as indicated below), who shall be engaged for engineering and detailed design of the project by the bidder. The qualification of the Consultants, Specialists etc. is indicated below along-with the minimum experience. The experience shall be duly supported by proper document. Bidders will be solely responsible for the correctness and accuracy of such documents produced in support of qualification and experience. Needless to say that the minimum requirement of the personnel listed below has to be fulfilled, otherwise, bid will be summarily rejected.

| Sl. No. | Consultant | Qualification |
|---------|---|---|
| 1 | Architect | B. Arch having valid Registration of Council of architecture having minimum 5 years experience in relevant field. |
| 2 | Electrical Consultant | B. Tech/ B.E. in Electrical having minimum 5 years experience in relevant field. |
| 3 | Acoustics and Audio Visual requirements | Expert in relevant field. |

Details to be provided as per Appendix 12.1

5.3. Annual Turnover: The Architect/architectural firm shall have an average annual turnover of not less than ₹12 lakhs from consultancy services as per audited financial results (to be submitted) in last three financial years up to the date of the submission of the bid. (Financial Years 2014-15, 2015-16 & 2016-17). Details to be provided as per Appendix 12.2.

5.4. Work Experience:

- a) The bidder must have at least three years experience (ending month of March 2017) of providing similar type of services to Central/State Government/PSUs/Nationalised Banks/Reputed Organisations. Services rendered with list of such Central / State / PSUs / Nationalised Banks / Reputed Organisations with duration of service shall be furnished.
Work done for reputed private organisation shall be considered only if documentary proof of income tax deductions at source made by such private organisation for the respective work is furnished to corroborate the facts, along with a completion certificate from client.
- b) The bidder must have successfully executed/completed similar services (References from the employers/end users should be included to that effect). "Similar Project" means "**Works involving Interior design , acoustics with noise control, AV systems designs for control rooms**", over the last three years i.e. the current financial year and the last three financial years:
- 1) Three similar completed services for the projects costing not less than the amount equal to ₹200 Lakhs each; or
 - 2) Two similar completed services for the projects costing not less than the amount equal to ₹250 Lakhs each; or
 - 3) One similar completed service for the projects costing not less than the amount equal to ₹400 Lakhs each

Details to be provided as per Appendix 12.3

Note:

1. Consultant must submit the details of previous installations with pictures/images for reference.
2. The bidder shall furnish complete documentary evidence by way of copies of work orders, work completion certificates, experience certificate of personnel, balance sheets and profit and loss accounts statement audited by Chartered Accountant in the first instance itself, in support of their fulfilling the above qualification criteria.
3. **Any bid lacking previously mentioned items would be summarily rejected.**

6. QUOTATION:

Quotation shall be submitted on **two part bid basis** viz. Techno-commercial bid and Price bid. Quotations that are satisfying our technical and commercial terms & conditions only will be eligible for opening price bid.

6.1. Techno-Commercial Bid:

The first bid shall contain the technical and commercial aspects and bill of material **without the price content**.

Bidder shall provide all the details in the quote as per section 5 for evaluation.

It is mandatory to provide all the details and proof as mentioned in section 5 along with the quote, otherwise the quote will be rejected.

6.2. Price Bid:

The second bid shall contain bill of material with prices. (as per the price bid format given in the Appendix 12.4)

7. SCHEDULE OF ACTIVITIES:

The Consultant shall adhere to the following schedule and the entire work shall be completed within 3 months.

| Schedule in days | Period in days | Activity |
|------------------|----------------|---|
| T + 0 | 0 | Issue of firm Purchase Order by the Department |
| T + 7 | 7 | Order acceptance by the Consultant |
| T + 17 | 10 | Submission of Conceptual Design Submission of architectural interior design proposals for false ceiling with LED light fittings, Wall panelling and console design including chairs for control room & visitors' gallery, and cabinet design for data acquisition room. (Minimum of 5 state of art 3D designs & rendering with various conceptual design) |
| T + 22 | 5 | Acceptance of the Conceptual design by the Department |
| T+ 32 | 10 | Submission of Preliminary Design and Drawings |
| T+ 37 | 5 | Clearance of Preliminary Design by the Department |
| T+52 | 15 | Submission of Tender Drawings and Tender Documents Submission of detailed Tender document for the Department accepted design with specifications, Drawings, Bill of material, costing and execution schedule |
| T+60 | 8 | Clearance of Tender documents by the Department Discussion with Department for review and final approval of Tender document. |
| T+70 | 10 | Submission of detailed technical drawings and other inputs required for tendering in the form of Soft copy and Hard copy (2 sets each). |
| T+90 | 20 | Submission of Working Drawings and Detailed Engineering drawings for construction purpose. |

8. SELECTION PROCESS:

The finalization of the Consultant will be carried out in three stages, as detailed below:

8.1. Stage-1

The firms found eligible as per the eligibility criteria mentioned in section 5.0 above would be further evaluated based on following documents.

- A. Architect / Architectural firm having registered with Council of Architecture before 5 years.
- B. Firm's Annual turnover statements for last three financial years.
- C. Documentary evidence by way of copies of work orders, work completion certificates for Similar Projects as per criteria in Section. 5.
- D. Experience certificate of personnel of the firm.
- E. Balance sheets and profit and loss accounts statement audited by Chartered Accountant in the first instance itself, in support of their fulfilling the qualification criteria in Section. 5.

8.2. Stage -2

The bidders selected as per Stage-1 will have to give presentation as a part of Technical Bid after completing their site study. The Department will review the proposals and Consultants will be short-listed based on the merits of the proposal. The proposal should contain the following:

- 1. Reference of Similar Project completed (Details including contact address to be provided).
- 2. A detailed proposal on the interior design for control room and Visitor's gallery.
- 3. 3-Dimensional views on the proposed internals.
- 4. Proposals to enhance the value addition of the existing facility, if any.
- 5. Capability to measure and demonstrate the acoustic performance of the realised facility.
- 6. The final proposal indicating cost benefit analysis.

The proposal will be evaluated based on design considering aesthetic, ergonomics, functional efficiency aspects, acoustic etc.

8.3. Stage -3

The price bid of technically qualified bidders will be opened and in that the lowest offer will be considered for awarding the contract.

9. PAYMENT TERMS:

| Sl. No. | Activities | % of quoted amount |
|---------|---|--------------------|
| 1 | On submission of Final Tender Drawings, Tender documents, bill of quantities, detailed cost estimate, Working Drawings. | 80% |
| 2 | Periodic supervision of work up to completion of actual work. | 20 % |

10. DELIVERABLES:

The consultant shall provide the following deliverables as per the schedule in Section. 7:

- 10.1 Design for false-ceiling and thermal insulation
- 10.2 Design for wall panelling
- 10.3 Detailed layout including console arrangements
- 10.4 Design for acoustics
- 10.5 Design for lighting and electrical fittings
- 10.6 Design for air conditioning for grills and diffusers
- 10.7 Design for Audio, Video requirements
- 10.8 Design for video walls and mounting arrangements
- 10.9 Design for operator consoles
- 10.10 Operator chairs & visitors gallery chairs
- 10.11 3-D views incorporating all the above (10.1 to 10.10) with Virtual Walk-through provision
- 10.12 Interior Design detailed drawings for Tendering and execution
- 10.13 Electrical/ Illumination detailed drawings for Tendering and execution
- 10.14 HVAC drawings for Tendering and execution
- 10.15 FDA, Smoke detection drawings for Tendering and execution
- 10.16 Tender documents for execution
- 10.17 Detailed Bill of materials including Technical specifications of all the elements involved and approved makes of materials, etc.
- 10.18 Schedule of activities
- 10.19 Details on stage inspection during work progress
- 10.20 Any other points including fire fighting systems, Smoke detection system, Safety, Civil works etc. as per the Department acceptance standards and other statutory norms.

11. SITE VISIT:

Bidder is advised to visit & examine the site and its surrounding to familiarise himself of the existing facilities & environment and shall collect all other information which may be required for preparing & submitting the Bid and entering into the contract. Claims and objections due to ignorance of existing conditions or inadequacy of information will not be considered after submission of the Bid and during implementation.

12. GENERAL TERMS:

It shall be deemed that by submitting a Proposal, the Bidder has:

- 11.1 Made a complete and careful examination of the Bidding Documents;
- 11.2 Received all relevant information requested from the Department;
- 11.3 Acknowledged and accepted the risk of inadequacy, error or mistake in the information provided in the Bidding Documents or furnished by or on behalf of the Authority relating to any of the matters above;
- 11.4 Satisfied itself about all matters, things and information necessary and required for submitting an informed Proposal, execution of the Project in accordance with the Bidding Documents and performance of all of its obligations there under;
- 11.5 Acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in the Bidding Documents or ignorance of any of the matters shall not be a basis for any claim for compensation, damages, extension of time for performance of its obligations, loss of profits etc. from the Authority, or a ground for termination of the Service Agreement; and
- 11.6 Agreed to be bound by the undertakings provided by it under and in terms hereof.

13. APPENDIX:

12.1 Company / Firm Related Information

All individual firms and each partner of a consortium are requested to complete the information in this form.

| | | |
|-----|---|--------------------------------------|
| 1. | Name of Applicant/Company | |
| 2. | Address for correspondence | |
| 3. | Contact Person: Telephone Nos. Fax Nos. Mobile | |
| 4. | Type of Organization: a) An individual b) A proprietary firm c) A firm in partnership (Attach copy of Partnership) d) A Limited Company(Attach copy of Article of Association) e) Any other (mention the type) | |
| 5. | Place and Year of Incorporation | |
| 6. | Details of Registration / Membership with council of Architects or Institute of Engineers or such other Institute. (Attach copy) | |
| 7. | Full time technical staff in Applicant's employment | a. Architect : b. Engineer: c. |
| 8 | Architect Working experience with Consultant (Since date & total no. of years.) | |
| 9 | Name(s) of the persons along with their qualification and designation, who is authorised to deal with IPRC | |
| 10. | Details of Awards/ Appreciations supported with document to be submitted. | |
| 11. | Any other Information | |

12.2 Financial Status:

Annual turnover of last three years of the Company.

[Bidder shall submit the information in the Format detailed here under]

| Sl. No. | Year | Turnover in Rs. | Remarks |
|---------|-----------|-----------------|---------|
| 1 | 2014-2015 | | |
| 2 | 2015-2016 | | |
| 3 | 2016-2017 | | |

12.3 Bidder's Experience:

A List of Similar jobs executed by the Bidder year wise with Name & address of person whom reference can be made shall be provided. [Bidder shall submit the information in the Format detailed here under] Supporting Documents must be attached.

| Sl. No. | Name of the Project & Client name/ | Detailed description of work | Scope of services | Value of project completed (in Rs.) | Total Built up Area | Date of Completion | Persons to whom Reference may be made |
|------------------|------------------------------------|------------------------------|-------------------|-------------------------------------|---------------------|--------------------|---------------------------------------|
| 1 | | | | | | | |
| 2 . . . | | | | | | | |

Note:

- Maximum 5 projects shall be specified in the following format starting from the highest value.
- Amongst these projects, at least one project shall be completed in last 3 years having built up area of 1000 sq. m. The same shall be highlighted.
- Project completion certificate from Client.
- Photographs & necessary drawings shall be submitted (A3 size).
- Any other specific details.

12.4 Price Bid Format:

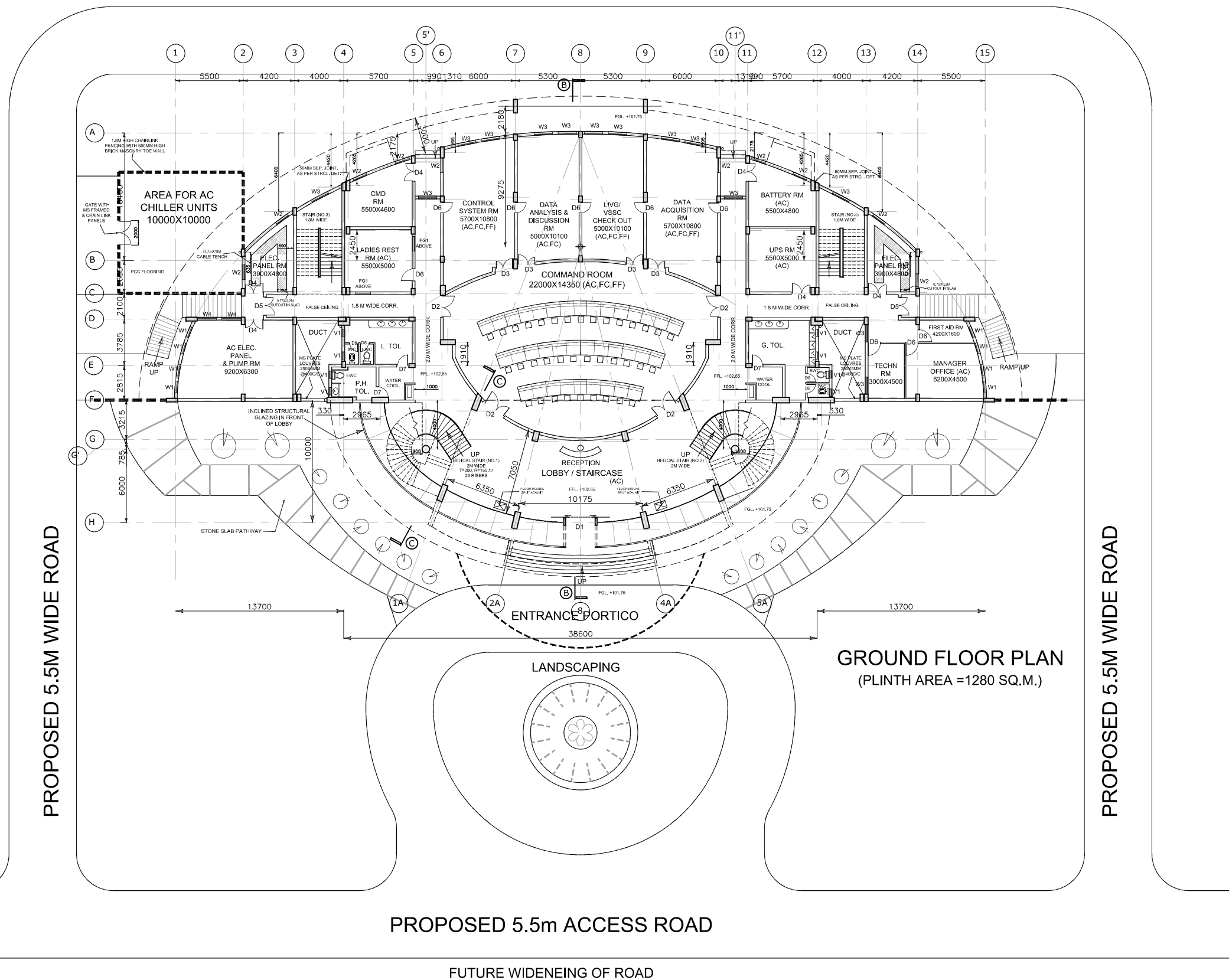
| Sl.No. | Description | Qty | Price |
|--|--|-------|-------|
| 1. | Consultancy for Architectural acoustic interior design work including false ceiling with LED light fittings, Wall panelling, console design including chairs, AV Systems for Control room & Visitors Gallery and cabinet design for service rooms as per RFP and as directed by the Department. The quoted rate shall include site visits during the execution of work whenever called (minimum 5 visits). | 1 job | |
| Total cost exclusive of taxes | | | |
| Taxes: GST | | | |
| Grand Total cost inclusive of taxes | | | |

Company Seal

(Authorised Signatory of Company)

Place: _____



ANNEXURE A TEST CONTROL CENTRE GROUND FLOOR PLAN

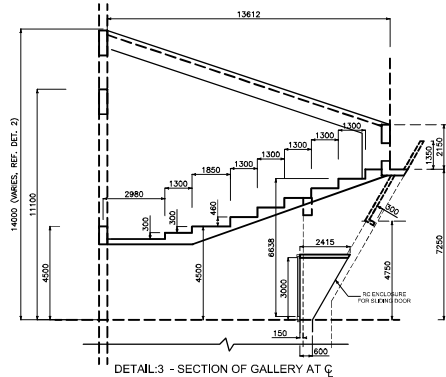
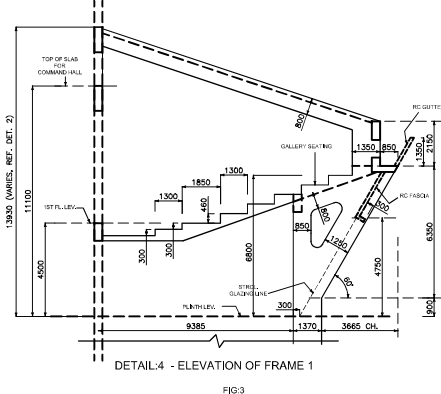
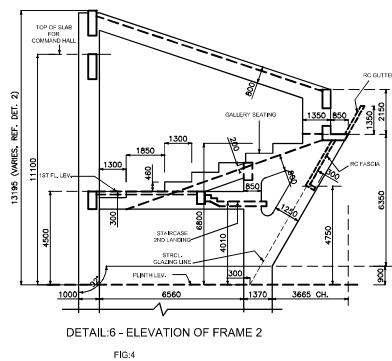


| OUTLINE SPECIFICATIONS | | | | |
|---|---|---|----|----------|
| FLOORING | 1. PVC FINISH OVER GRID TYPE FALSE FLOORING AS PER SPECS. FOR THE COMMAND ROOM, CONTROL SYSTEM ROOM, LVIS CHECKOUT AND DATA ACQUISITION RM. 2. POLISHED GRANITE FLOORING FOR THE LOBBY, CORRIDORS AND STAIRCASE TREADS & RISERS. 3. 600X600 VITRIFIED TILE FLOORING FOR OFFICES, DATA ANALYSIS RM, LADIES REST ROOM, DINING, BATTERY & UPS RM AND OTHER AC AREAS. 4. CARPET OVER CEMENT CONC. FLOORING FOR THE VISITORS GALLERY AREA. 5. 300X300 CERAMIC ANTI SKID TILES FOR THE TOILET, HANDWASH AND WATER COOLER AREAS. 6. IPS FOR THE AHU, ELECTRICAL PANEL RM AND OTHER SERVICE AREAS. | | | |
| SKIRTING | 125MM HIGH MATCHING WITH THE FLOOR | | | |
| DADO | CERAMIC WALL TILES 2100MM HIGH IN TOILETS, HANDWASH, DRINKING WATER POINT, PANTRY | | | |
| WALLS | INTERNAL: ACRYLIC EMULSION PAINTS EXTERNAL: EXTERIOR ACRYLIC EMULSION PAINTS, CEMENT CONC. DESIGNER TILE CLADDING FOR THE SIDE WALLS CHAMFERED AT THE ENDS. | | | |
| FALSE CEILING | COMBINATION OF :- 1.) GRID TYPE METALLIC FALSE CEILING OF LUXALON OR EQV. WITH 50% TILES OF PERFORATION TYPE HAVING 40MM MINERAL WOOL INSULATION; 2) SEAMLESS CALC. SILICATE IN AREAS HAVING VERTICAL/INCLINED SURFACES; FOR ALL OTHER AC AREAS INCLUDING CORRIDOR. | | | |
| WALL PANNELLING | COMBINATION OF 4MM TH. VENEER FIN. OVER PLYWOOD AND WALL CARPET FOR ABSORPTIVE SURFACES FOR THE VISITORS GALLERY, COMMAND ROOM AND CONFERENCE HALL. | | | |
| STRCL. GLAZING | ALU. FRAMED STRUCTURAL GLAZING WITH AVG. PANEL WIDTH OF 1200MM (WEDGE SHAPED BUT STRAIGHT GLASS) WITH 10MM TOUGHENED GLASS TINTED WITH LOW SHGC & 'U' FACTOR. | | | |
| PLINTH PROTECTION | 1000mm WITH P.C.C. AROUND THE BUILDING. | | | |
| ROOF | RC FLAT ROOF WITH 3 LAYERED WPC. RC SLOPED ROOF WITH ELASTOMERIC WATER PROOFING/THERMAL INSUL./SOLAR REFLECTIVE ALU. COATING OF MARVEL ISUL-KOAT OR EQV. | | | |
| # UNDER DECK THERMAL INSULATION FOR THE EXPOSED ROOF OF ALL AC AREAS. | | | | |
| # SUN CONTROL FILM FOR THE GLAZED WINDOWS. | | | | |
| SCHEDULE OF OPENINGS | | | | |
| TYPE | SIZE | DESCRIPTION | | |
| D1 | 2400X2400MM | FRAMELESS GLAZED SLIDING DOORS WITH 10MM TOUG. GLASS OF DORMA OF EQV. WITH ALU. PATCH FITTINGS. | | |
| D2 | 1600X2100MM | PS FRAMED FLUSH DOOR WITH VISION PANEL | | |
| D3 | 1500X2100MM | PS FRAMED FLUSH DOOR WITH VISION PANELS | | |
| D4 | 1500X2100MM | STEEL DOOR | | |
| D5 | 1500X2100MM | PS FRAMED FLUSH DOOR | | |
| D6 | 900 X 2100MM | PS FRAMED FLUSH DOOR | | |
| D7 | 900X2100 MM | GRP DOOR | | |
| D8 | 750X2100 MM | GRP DOOR | | |
| D9 | 1500X2100 MM | SAME AS D2 | | |
| D10 | 900X2100 MM | PS FRAMED DOOR | | |
| D11 | 900X2100 MM | STEEL DOOR | | |
| W1 | 900X1200MM | ALU. FRAME PARTLY FIXED/OPENABLE GLAZING | | |
| W2 | 1200X1200MM | SAME AS W1 | | |
| W3 | 1500X1200MM | SAME AS W1 | | |
| V1 | 600X900MM | ALU. FRAME GLASS LOUVERED VENTILATOR | | |
| FG1 | 1200X900MM | ALU. FRAMED FIXED GLAZING | | |
| NOTES | | | | |
| * ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED | | | | |
| * THE DRAWING IS NOT TO BE SCALED, ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED | | | | |
| * ALL ALU. FRAMES ARE COLOUR ANODIZED AS PER DETAILS. | | | | |
| * MS SAFETY GRILLS TO BE PROVIDED FOR ALL WINDOWS/VENTILATORS. | | | | |
| REVISIONS | | | | |
| SL.NO | DATE | DESCRIPTION | HA | AD |
| 01 | 30.09.14 | SPECIFICATIONS REVISED AS PER ESTIMATE PROVISIONS | | |
| CEPO | | | | |
| SCALE:- 1:150 | | DATE : 30.07.2014 | | |
| APPROVED BY | | RECOMMENDED BY | | DRG. NO. |
| Dr. D. P. SHARMA DIRECTOR, CEPO | | B. ANANTHAKRISHNAN HEAD ARCHITECTURE | | |
| DEALT BY | | CEPO/ARC/7024/ IETF/TCC/WD1/R1 | | |
| BIPUL DAS ARCHITECT | | ARCHITECTURE SECTION | | |
| TEST CONTROL CENTRE GROUND FLOOR PLAN | | | | |
| PROPOSED IETF AT IPRC, MAHENDRAGIRI | | | | |

TEST CONTROL CENTRE FIRST FLOOR PLAN

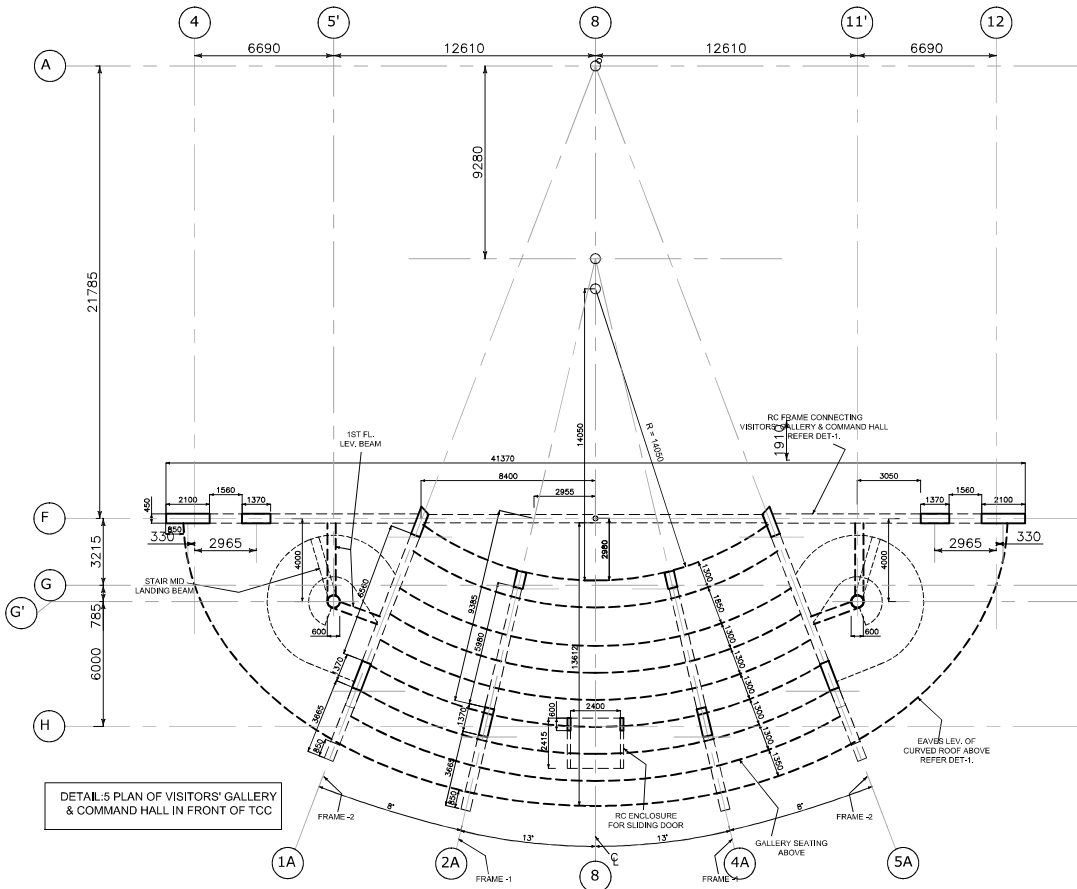
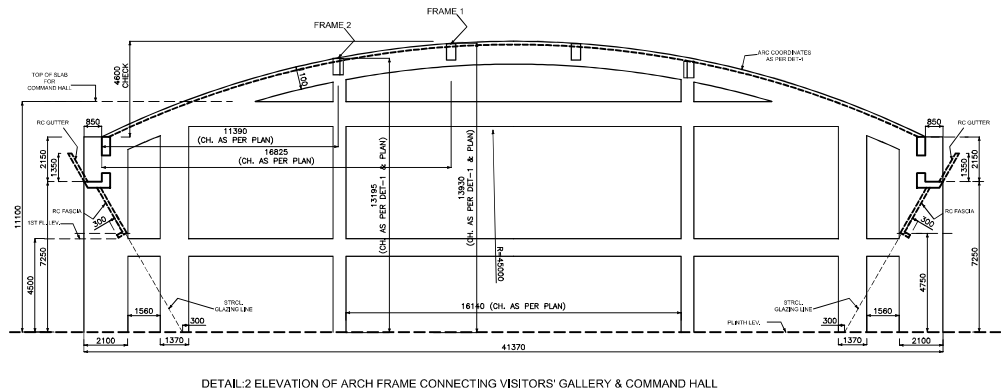



| REVISIONS | | | | |
|---|----------|---|---|----------|
| SL.NO | DATE | DESCRIPTION | HA | AD |
| 01 | 30.09.14 | LIGHT WEIGHT CANOPY – SPECIFICATIONS REVISED AS PER ESTIMATE PROVISIONS | | |
|  | | | | |
| SCALE:— 1:150 | | | DATE : 30.07.2014 | |
| APPROVED BY | | RECOMMENDED BY | | |
| Dr. D. P. SHARMA DIRECTOR, CEPO | | B. ANANTHAKRISHNAN HEAD ARCHITECTURE | | DRG. NO. |
| DEALT BY | | CEPO/ARC/7024/ IETF/TCC/WD2/R1 | | |
| BIPUL DAS ARCHITECT | | ARCHITECTURE SECTION | | |
| <p style="text-align: center;">TEST CONTROL CENTRE FIRST FLOOR PLAN</p> | | | | |
| <p style="text-align: center;">PROPOSED IETF AT IPRC, MAHENDRAGIRI</p> | | |  | |



DETAILS OF
STRUCTURAL
SUPPORT
ARRANGEMENT
FOR THE
VISITORS'
GALLERY &
ENTRANCE
LOBBY
IN FRONT
OF TCC

NOTE: REFER DETAILS 1-5 FOR
RELEVANT DIMENSIONS.



| REVISIONS | | | | |
|--|------------------------|---|--------------------------------|---|
| SL.NO | DATE | DESCRIPTION | HA | AD |
| | | | | |
| | | | | |
| | | | | |
| <div>C</div> <div>E</div> <div>P</div> <div>O</div> | | | | |
| SCALE:— 1:150 | | | DATE : 30.07.2014 | |
| APPROVED BY | | RECOMMENDED BY | | |
| Dr. D. P. SHARMA DIRECTOR, CEPO | | B. ANANTHAKRISHNAN HEAD ARCHITECTURE | | |
| | DEALT BY | | CEPO/ARC/7024/ IETF/TCC/WD4 | |
| | BIPUL DAS ARCHITECT | | ARCHITECTURE SECTION | |
| TEST CONTROL CENTRE STRUCTURAL DETAILS – VISITORS GALLERY | | | | |
| PROPOSED IETF AT IPRC, MAHENDRAGIRI | | | |  |